

Irregular *-t* and Regular *-ed* Forms of Preterit/Past Participle in BrE and AmE: Corpus-based Study

MyungHa Oh
(Seoul National University)

Oh, MyungHa. 2013. Irregular *-t* and Regular *-ed* Forms of Preterit/Past Participle in BrE and AmE: Corpus-based Study. *SNU Working Papers in English Linguistics and Language* 12, 92-110. This paper aims to investigate the difference in distribution of regular *-ed* and irregular *-t* forms of preterit and past participle based on corpus data. The main hypotheses addressed in this paper are: a) verbs with double forms (as in *burnt/burned*) will show distributional difference, b) there is a common ground that can be applied to all *-ed/-t* variants. The paper has been divided into four parts: historical change, text type, grammar, and semantic difference. The main verbs for this study are *dream, dwell, leap, and smell*. The details are studied with data from COCA, COHA, and BNC.
(Seoul National University)

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1. Introduction

In 17th~18th, English went through regularization. During those periods, variation was suppressed. As a result, English we learn in present day has small amount of inflectional variation. We are learned to attach *-s* after a verb if a subject is a third person singular and attach nothing otherwise. For instance, it is hard to deny that there is some kind of stigma attached to using *-s* after a verb with first person singular. This shows how much English favors regularized and standardized system. However, there are variations that are still used without stigma attached in Standard English: coexistence of regular *-ed* and irregular *-t* forms in preterit and past participle of irregular verbs. There are a certain set of verbs with *-ed/-t* forms as in *burnt/burned, spilt/spilled* and *-t* forms are still used frequently and this phenomena invites investigation

because it survived regularization of English.

It makes me wonder why they are still here. There are lots of assumptions and arguments for the reason of coexistence of *-ed* and *-t* forms. And it is usually related to dialectal preference, phonological process, register, tense, aspect or meaning differences. Some studies have suggested theoretical explanation for this and some have conducted experiments on people in order to find out the difference between two forms. However, there are only a few studies that investigate this issue on corpus-based data. So the purpose of this paper is to examine *-ed/-t* distribution in several categories mentioned above using corpus data for empirical backup. The analyses are divided into four parts: historical change, text type, grammar, and semantic difference in order. In this paper, my hypotheses are as below:

- 1) Regular *-ed* and irregular *-t* forms will show distributional difference.
- 2) There is a common ground that can be applied to all *-ed/-t* variants: These verbs will show the same distributional pattern in at least one category among historical change, text type, grammar, or semantic difference.

2. Previous Studies

Variation in the usage of irregular verbs has been studied in many previous literatures without general consensus. Many scholars have tried to explain it with dialectal preference and this view is dominantly strong. For example, Levin (2009:81) argued that there is a higher frequency of *-t* endings in British English than American English¹. And

¹ There are many other papers supporting this view. For example, Eric Wikstorm (*Non-Standard -ed Forms of Irregular Verbs in Present-day American English*) and Pam Peter (*Irregular verbs: Regularization and ongoing variability*) stick to this view in

also Flower suggested that there is a tendency for a certain form in AmE and BrE in his book² (1996) as in the quotation below.

Smelt, smelled: In BrE either *smelled* (much less commonly) or *smelt* is used for the pa.t and pa.pple. In AmE *smelled* is the dominant form for both.

Spilt, spilled: There is also evidence to support the suggestion that *spilt* may be the more usual term in BrE in other uses and *spilled* the favored form in AmE and elsewhere, but the evidence is not clear-cut.

Spoilt, spoiled: In AmE *spoiled* is the more usual form of the two in all three parts of speech.

-t and -ed: in most of the verbs the Americans show a marked preference for the forms in *-ed*.

On the other hand, numerous studies have attempted to explain the difference between *-ed/-t* forms in different category such as tense, aspect, meaning, or register. For example, Quirk (1985) argued for an aspectual and tense distinction marked by *-ed/-t* forms. In a text he carried out with British and American students, both British and American students showed a preference for *-ed* suffix with preterit and *-t* suffix with past participle. The test further showed an aspectual distinction with *-ed* to a durative aspect and *-t* to a punctual aspect. In *Lexical Semantics and Irregular Inflection* written by Yi Ting Huang and Steven Pinker, four experiments were conducted and the result showed that *-ed/-t* forms are perceived as a mark to distinguish aspectual or semantic differences. Moreover, in *Dong-A Prime English-Korean Dictionary*, it is said that these two variants are used to

their own analysis.

² In his first edition (*A Dictionary of Modern English Usage*, 1926), Fowler did not mention much on AmE and BrE difference of *-ed/-t* forms. But in *Modern English Usage*, Third Edition edited by R.W. Burchfield, 1996, the preference for certain forms in AmE or BrE is underlined.

distinguish literal meaning and figurative meaning for some verbs.

Jenny Cheshire considered the relation between this coexistence and history in her paper *Standardization and the English irregular verbs*. And she argued that some strong verbs began to follow weak verb's inflectional pattern and during this process, *-t* suffix was used as a kind of social distinction marker for cultivated classes, which resulted in the coexistence of *-ed/-t* variants of a verb.

There are also studies that analyze their distribution and differences using actual corpus data. For instance, in *영어 동사의 규칙·불규칙 변이 연구*: *burn, speed, spill, spoil*을 중심으로, Kwon, Heok-Seung used two corpora: the Corpus of Contemporary American English (COCA) and the British National Corpus (BNC). He compared and examined data with previous literature including dictionaries and authoritative grammar books in order to provide precise description for those verbs. And the result showed that analysis drawn from actual data can be proved to be different from general explanation and it provides more precise perspective. This tells us the importance of studies with actual language data.

There have been lots of studies on this coexistence of *-ed/-t* forms of the same verb as mentioned above. And they have provided various perspectives to start with. But only a few have used empirical data from corpus. And I became curious if all those factors mentioned and investigated are truly a perceived marker for *-ed* and *-t* forms or not. To really see and find out the difference between two forms, we need to make use of actual data. With actual corpus data, I attempt to examine factors previously researched: historical change, text type, grammar (tense, structure, etc), and semantic difference. And as I already spoke in hypothesis, I think that among those factors, there is at least one factor that can be applied to explain the distributional difference of all verb set with *-ed/-t* variants.

3. Material and Method

Corpus of Contemporary American English (COCA) and British National Corpus (BNC) were used to select the main verbs to investigate and to extract sample sentences from. For the analysis of historical change, I used Corpus of Historical American English (COHA) because it is easy to trace temporal change of language from 1810th to 2000th. Wordsmith version 3.00.00 was used to arrange and analyze sample sentences since it is easier to control array of sentences than web corpus.

Four verbs were selected for this study: *dream*, *dwell*, *leap*, *smell*. A relatively small sample was chosen because of the expected difficulty of examining data in detail. Processes to select the verbs were as follows: 1) I first eliminated verbs that have been already focused on in previous research 2) Verbs that have various range of frequency in COCA and BNC were selected. Table 1 shows the frequency and proportion of each form of four verbs in COCA and BNC when it is used as a verb. Frequency is per million converted from raw frequency since COCA and BNC are different in size.

Table 1. Frequency and proportion of four verbs (per 100 million)

	COCA			BNC		
	Regular -ed	Irregular -t	proportion of -ed:-t	Regular -ed	Irregular -t	proportion of -ed:-t
dream	1197	142	9:1	716	268	7:3
dwell	46	62	4:6	14	142	1:9
leap	485	387	6:4	197	832	2:8
smell	1288	42	9:1	315	385	4:6

Four verbs (*dream*, *dwell*, *leap*, *smell*) were examined with sample

sentences from COCA and BNC³. The sample size was 100 sentences for each form of each verb, which resulted in about 1600 sentences in total (800 sentences from COCA, 800 sentences from BNC). However, raw frequency of *dwelled* in BNC was only 14 and sample sentence for smelled in BNC were only 14. Therefore, 1514 sentences were used as sample sentences in total.

4. Analysis

In this section, results from analysis of 1514 sentences are presented. Four parts are dealt with in order: historical change, text type, grammar, semantic difference.

4.1 Historical Change

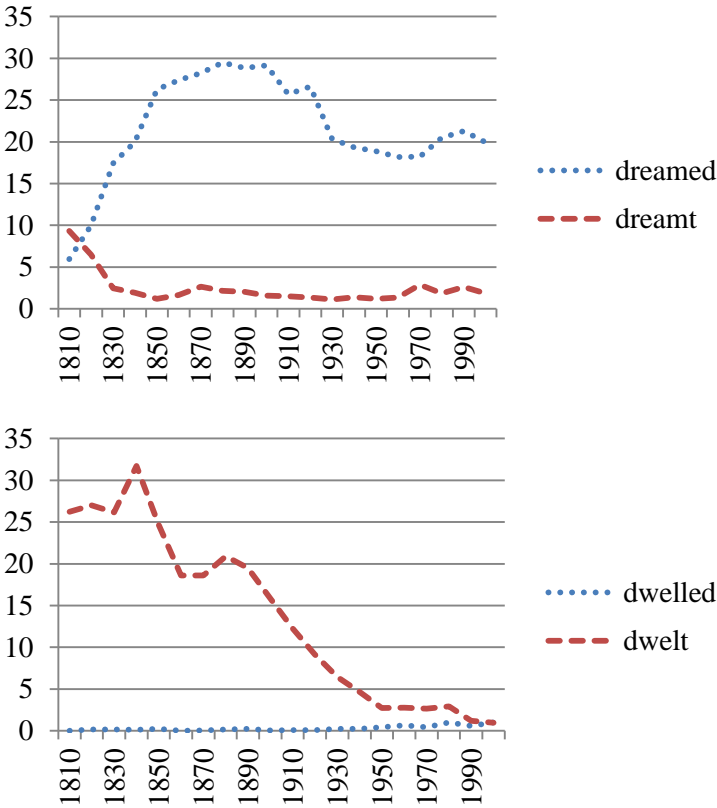
In this subsection, we will look into historical change and development of four verbs using COHA. With a study on historical trace of them, we will be able to see a general tendency or significant features of regular *-ed* and irregular *-t* forms.

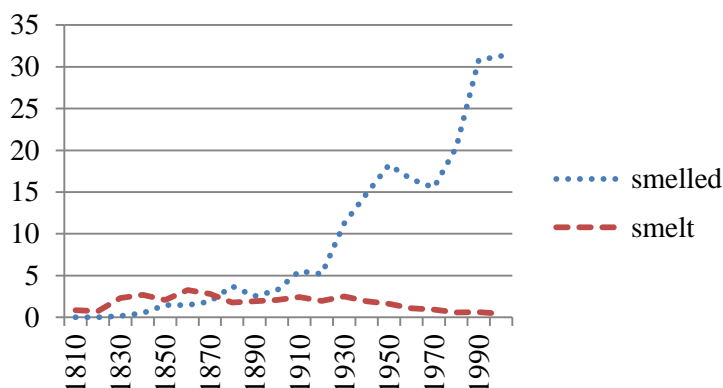
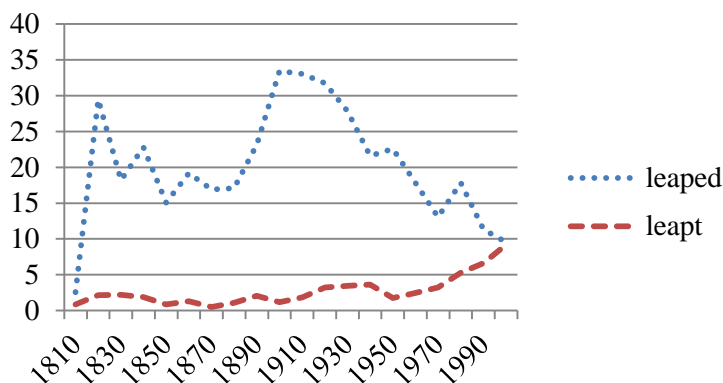
Figure 1 below is graph of each verb showing development of changes from 1810th to 2000th. They all have gone through difference developmental trend. In case of *dream*, *dreamt* prevailed before 1820th and then started to go down. During 1820th to 1880th, *dreamed* rapidly increased and have maintained the position since. In a graph of *dwel*, *dwelt* have been more frequently used until 2000th then both forms met. It is predicted that *dwelled* will catch up and be used more. Let's take a look at a graph of *smell*. *Smelled* started to outnumber *smelt* from 1870th. The verb *leap* looks very different. The regular form *leaped* has always been more frequent than the irregular form *leapt* until 2000th.

³ The sentences are appended below in at Appendix 1.

During 2000th they have met and now it looks like the irregular form *leapt* is about to overtake.

Figure 1. Historical trend of four verbs





Four verbs show different developmental trend but *dream*, *dwell*, and *smell* have something in common: the regular *-ed* form is favored or at least expected to be. However, *leap* looks exactly opposite. The regular *-ed* form was used much more than *-t* suffix all along and recently *leapt* is to overtake. So three verbs are to be considered as going through regularization unlike *leap*. It is plausible for three verbs to be regularized since that is one characteristic of English. Then what about *leap*? In this case, phonological process can give an explanation. Because of voiceless sound /p/, even *-ed* suffix is pronounced /t/ in *leap* through assimilation which results in preference for *leapt*.

The findings in this analysis suggest that many verbs are going through the process of regularization and there are exceptions for phonological reasons.

4.2 Text Types

In this subsection, distribution of each forms of each verb in text types are analyzed in order to see whether if a certain form is more used in certain text than the other form. It should be mentioned that the value size in distributed graphs below does not reflect the size of their absolute frequency. It is just to compare the proportion according to text types, not absolute frequency.

Figure 2 and Figure 3 present distributional difference of *-ed* suffix and *-t* suffix of *dream* from COCA and BNC. As you can see, in AmE, *-ed* suffix is used in more various types and *-t* suffix only popular in fiction. On the other hand, in BrE, it is rather opposite. *Dreamt* is used in much more text types than *dreamed*.

Figure 2. Text type distribution of *dream* in COCA

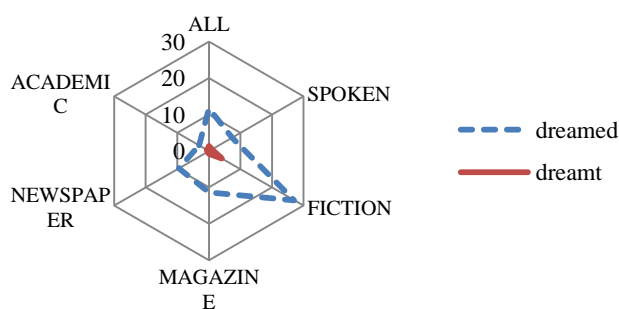


Figure 3. Text type distribution of *dream* in BNC

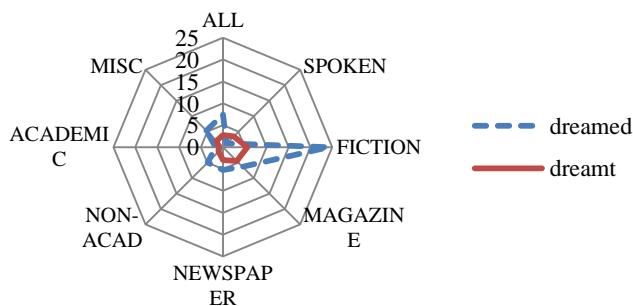


Figure 4. Text type distribution of *dwel* in COCA

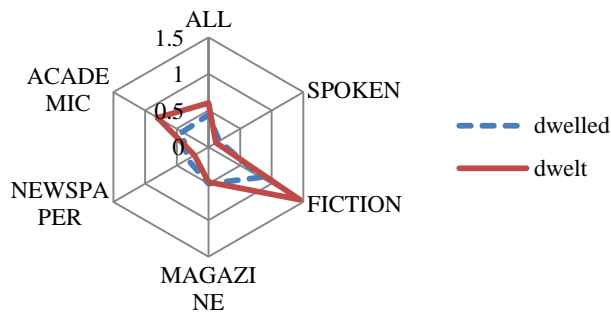


Figure 5. Text type distribution of *dwell* in BNC

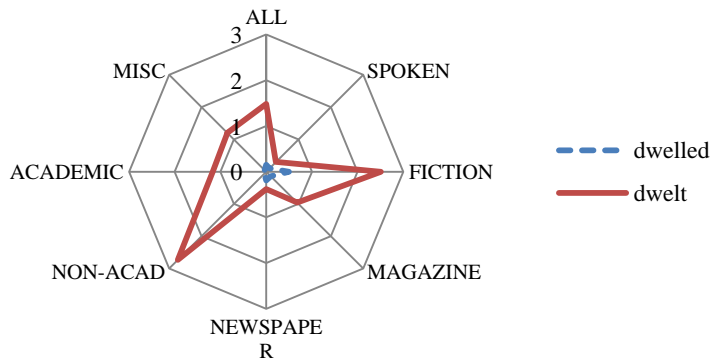


Figure 4 and Figure 5 show distributional portion of the verb *dwelt*. In AmE, *-ed* suffix is used much more diversely and in BrE, *-t* suffix is preferred in many text types, especially in non-academic type.

Figure 6 and Figure 7 are graphs that show proportional distribution of *leap*. From this data, in AmE, both forms do not seem to have much difference. In BrE, *leapt* is used in slightly more various text types as other verbs above.

Figure 6. Text type distribution of *leap* in COCA

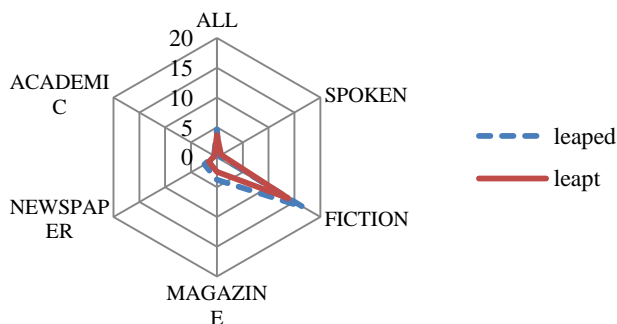


Figure 7. Text type distribution of *leap* in BNC

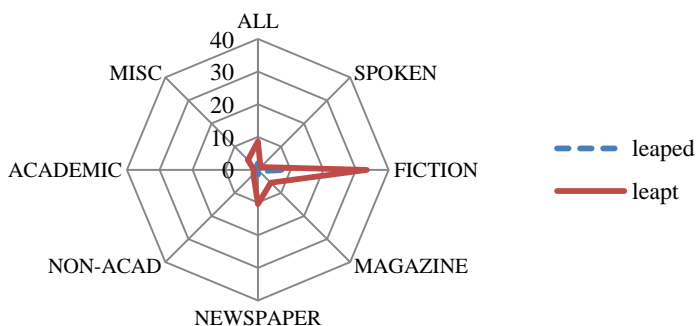


Figure 8 and Figure 9 below show proportion of the verb *smell*.

Figure 8. Text type distribution of *smell* in COCA

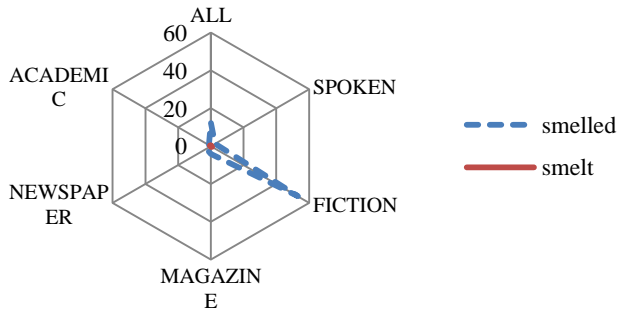
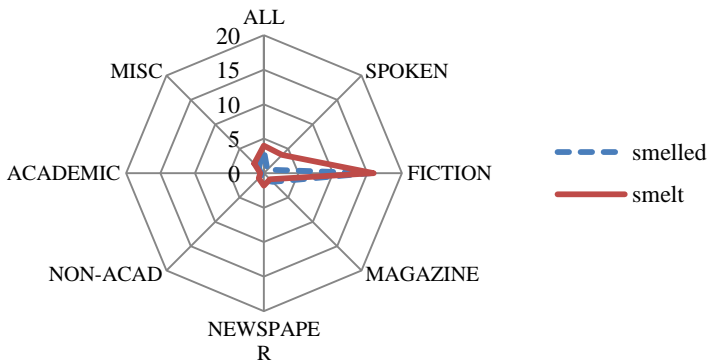


Figure 9. Text type distribution of *smell* in BNC



In case of this verb, in both AmE and BrE, *-t* suffix is used more diversely. *-ed* form is mainly used in fiction and almost nothing in anywhere else.

In this text type subsection, we compared *-ed* and *-t* suffix according to various text types. We saw distributed graphs that show distributional proportion of each form and in BrE, *-t* suffix was constantly popular in

diverse text types while *-ed* suffix is mainly limited in fiction area. On the other hand, in AmE, there is no regular feature detected. In case of *dream* and *dwell*, *-ed* form was used in more various text types, and in case of *leap*, there was no big difference to be found between two forms. *Smell* was similar to BrE in that *-t* suffix is found more diversely.

4.3 Grammar

In this subsection, grammatical difference will be examined including tense marker, and intransitive/transitive. To check if Quirk's (1985) test⁴ result is really true in present day English, we start with tense first. I extracted sample sentences from COCA and BNC to calculate the numbers of preterit and past participle use in each form. As I explained earlier, 100 sentences for each form were examined, and the result is as in Table 2. Preterit is spelled pre and past participle, past in Table 2.

Table 2. Tense distribution for each form

	COCA				BNC			
	regular -ed		irregular -t		regular -ed		irregular -t	
	pre	part	pre	part	pre	part	pre	part
dream	73	27	65	35	57	43	47	53
dwell	78	22	75	25	11(79%)	3(21%)	74	26
leap	92	8	89	11	95	5	95	5
smell	92	8	84	16	86	14	85	15

In Table 2, the percentage is given beside *dwelled* and *dwelt* in BNC for reader's convenience because the number of sample sentences is only 14 as I mentioned in section 3. Other than this one case, I used 100 sentences as a sample for each form, so there was no need to convert the figure into percentage since the figure and percentage will be

⁴ In the test, both British and American students a statistically significant preference for *-ed* suffix with preterit and *-t* suffix with past participle.

exactly the same.

Figure patterns are relatively constant for *dwelt*, *leapt*, and *smelt*. There is preference for preterit regardless of Corpus and choice of suffix. Only *dream* show a slight difference. In AmE, both *dreamed* and *dreamt* have higher frequency in preterit while in BrE, the proportion of preterit and past participle are similar between *-ed* suffix and *-t* suffix. It is apparent from this table that in present day English, *-ed* suffix and *-t* suffix are not perceived as tense marker, which is quite distinguishable from Quirk’s test (1985).

In some dictionaries and grammar books, it is assumed that *-ed/-t* variants are used to distinguish transitive and intransitive usage of a verb. I counted the numbers of *-ed/-t* suffixes to compare the frequency between when it is used in transitive verbs and intransitive verbs. *Dream*, *dwelt*, and *leapt* did not show any particular results on this question. But in case of *smelt*, the difference was clear as in Table 3.

Table 3. The frequency of *smelt* in transitive and intransitive usage

	COCA		BNC	
	transitive	intransitive	transitive	intransitive
smelted	24	76	35	65
smelt	54	46	53	47

In both AmE and BrE, *-ed* suffix is preferred in intransitive usage taking up 76% in COCA and 65% in BNC. *Smelt* is quite different from this. The suffix *-t* was used in both transitive and intransitive phrases without any distinct tendency.

In this subsection, we looked into the distribution in tense and transitivity of a verb. Four verbs did not have the same tendency. In tense analysis, only *dream* showed evident result. And in transitivity analysis, *smelt* was the only verb that supported previously mentioned argument: *-ed/-t* variants are used to distinguish transitive and intransitive usage of a verb.

4.4 Semantic Difference

In this subsection, we investigate the distribution of *-ed* suffix and *-t* suffix in terms of semantic difference. As I stated in section 2, some previous researchers have made a proposal that for some verbs, these two variants are used to distinguish literal meaning and figurative meaning. With reference to *Collins Cobuild Advanced Learner's English Dictionary* and *Webster's Learner's dictionary*, I divided the meanings of these verbs into two: literal and figurative⁵. I assorted sample sentences according to whether the verb has literal meaning or figurative meaning and counted them. The result is summarized in Table 4.

Table 4. Distribution of *-ed/-t* suffix according to meaning

	COCA		BNC	
	literal	figurative	literal	figurative
dreamed	28	72	27	73
dreamt	55	45	38	62
dwelled	54	46	9 (64%)	5 (36%)
dwelt	67	33	45	55
leaped	83	17	89	11
leapt	90	10	88	12
smelled	97	3	93	7
smelt	92	8	93	7

⁵ Refer here for the detail.

Dream: 1. to have visions and thoughts in your sleep. [literal]
2. to think about something that you wish would happen. [figurative]
Dwell: 1. to live in a particular place. [literal]
2. to think or talk about (something) for a long time. [figurative]
Leap: 1. to jump or move quickly (from something, place). [literal]
2. to suddenly increase/ take an opportunity. [figurative]
Smell: 1. To become aware of something through your nose. [literal]
2. to be aware of fear, danger, trouble, etc. in a situation. [figurative]

No significant patterns that are applicable to all of the verbs are found in Table 4, but I think it is worth mentioning the results of *dream* and *dwell*. First, let's take a look at *dream*. In BrE, both of *dreamed* and *dreamt* are frequently used in figurative meaning. 73% of *dreamed* and 62% of *dreamt* had a figurative meaning. In other words, there was no difference to be found between *-ed* suffix and *-t* suffix when it comes to meaning difference in BrE. However, in AmE, *-ed* suffix and *-t* suffix had distributional difference. *Dreamed* were used in figurative sense almost three times more than in literal sense (28% in literal, 72% in figurative sense). *Dreamt*, on the other hand, did not show any notable tendency. American English tends to make use of *-ed* suffix to describe figurative meaning in case of the verb *dream*.

What can be assumed from the data of *dwell* is interesting as well. The frequency indicates that the tendency of American English and British English is opposite. In COCA, *-ed* suffix is used in literal and figurative sense with similar proportion, whereas *-t* suffix is used in literal meaning twice as many as *-ed* suffix. On the contrary, *-ed* suffix in BNC shows similar aspect with *-t* suffix in COCA. 64% of *dreamt* is used in literal meaning and the rest in figurative meaning. Although the number of sample sentences is too small to make any argument, the proportion should not be looked over. And *-t* form showed similar proportion in both meanings as *-ed* suffix in COCA. In other words, *-t* suffix in AmE and *-ed* suffix in BrE were preferred in literal meaning.

In this subsection, a question on which form tends to be used in which meaning was studied with the results from two corpora. There was no similar tendency to be found among four verbs. *Leap* and *Smell* did not even show any difference between *-ed/-t* variants. An interesting proportion was observed in *dream* and *dwell*, but their distribution within each corpus was marked differently.

5. Discussion

This paper was started with curiosity about coexistence of regular *-ed* and irregular *-t* forms of certain set of verbs. There have been many previous researches on this phenomenon. And there have been various arguments such as dialectal preference, text type, history, tense, aspect, and meaning. The main purpose of this paper was to see if *-ed/-t* forms show distributional difference over these factors using corpus data. Main hypothesis was that they will so and there will be a common ground that can be applied as an explanation for all *-ed/-t* variants among these factors.

I went through four analyses in order: historical change, text type, grammar, and semantics. In each subsection, there was interesting findings for some verbs. In historical change section, I found that most of verbs have been experiencing regularization but there is an exception for some reasons such as phonological economics. In text type section, I could draw a conclusion that in BrE, *-t* suffix is commonly used in various types. But in AmE, there was no pattern to be found. In grammar section, *dream* showed a pattern that divides AmE and BrE. Also transitivity analysis showed that *-ed* suffix is used in intransitive sentence in both AmE and BrE. In semantic analysis, *-ed* suffix in *dream* was preferred in figurative meaning and *-t* in AmE and *-ed* in BrE was used frequently in literal sense. These are summarized patterns that were observed in section 4. So clearly there was an interesting point and distributional differences as my first hypothesis. My second hypothesis was that these verbs will show the same distributional pattern in at least one category among historical change, text type, grammar, or semantic difference. However, I could not find any common ground that was shared by all four verbs except that *-t* suffix in BrE tends to be used in more various text types. It would have been better if we could explain the reason for the coexistence of *-ed/-t* forms on only one ground as my second hypothesis. Unfortunately no sign of

that was observed in this study. But there were certain patterns that should not be looked over.

It is recommended that further research be undertaken in the following areas. First, in observing historical changes, only American English history was available. Looking into British English history would be helpful in finding out patterns of these *-ed/-t* forms. In addition, I could not consider for the correlation among four areas. So it is suggested to have a close examination on the correlation and effects of those four areas on each other. These further studies will augment previous studies and provide an important implication for linguistics.

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University Linguistic C-essay.*

Myungha Oh
hayhnh@snu.ac.kr